

TJI® Joists Header-Off Span Table

For certain situations, a typical repair detail may not be sufficient or there may not be enough room to install the required repair materials. In such cases, the most common method of repairing the damaged TJI® joist is to install a header on either side of the damaged region and attach the header(s) to the adjacent, undamaged TJI® joists. This repair technique is typically referred to as **Header-Off, Headered-Off, or Head-Out**.

Table 1 gives the maximum allowable clear spans for both the damaged TJI® joist and the adjacent, undamaged TJI® joists. **Detail H2A** provides supplementary information regarding the installation of a Header-Off repair.

TABLE 1: TJI® JOIST HEADER-OFF^{[1][2]}

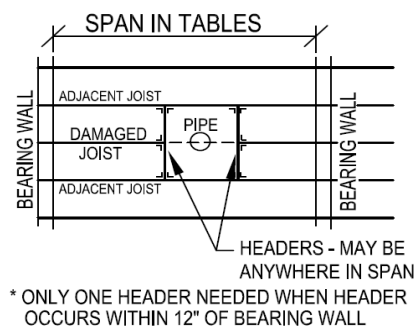
Joist Depth	TJI® Series	Maximum Allowable Clear Span							
		40 PSF (Live) \ 10 PSF (Dead)				40 PSF (Live) \ 20 PSF (Dead)			
		12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
9 1/2"	110	14'-8"	13'-4"	12'-7"	10'-2"	14'-8"	12'-9"	10'-7"	8'-5"
	210	15'-4"	14'-0"	13'-2"	11'-4"	15'-4"	14'-0"	11'-9"	9'-5"
	230	15'-10"	14'-5"	13'-7"	12'-7"	15'-10"	14'-5"	13'-3"	10'-7"
11 7/8"	110	17'-5"	15'-4"	12'-9"	10'-2"	16'-7"	12'-9"	10'-7"	8'-5"
	210	18'-3"	16'-8"	14'-2"	11'-4"	18'-3"	14'-2"	11'-9"	9'-5"
	230	18'-9"	17'-1"	15'-11"	12'-8"	18'-9"	15'-11"	13'-3"	10'-7"
	360	19'-10"	18'-0"	16'-3"	13'-0"	19'-10"	16'-3"	13'-6"	10'-9"
	560	22'-6"	20'-6"	19'-3"	15'-10"	22'-6"	19'-10"	16'-6"	13'-2"
14"	110	19'-9"	15'-4"	12'-9"	10'-2"	17'-1"	12'-9"	10'-7"	8'-5"
	210	20'-9"	17'-0"	14'-2"	11'-4"	18'-11"	14'-2"	11'-9"	9'-5"
	230	21'-4"	19'-2"	15'-11"	12'-8"	20'-11"	15'-11"	13'-3"	10'-7"
	360	22'-6"	19'-6"	16'-3"	13'-0"	21'-9"	16'-3"	13'-6"	10'-9"
	560	25'-7"	23'-2"	19'-10"	15'-10"	25'-7"	19'-10"	16'-6"	13'-2"
16"	110	-	-	-	-	-	-	-	-
	210	22'-9"	17'-0"	14'-2"	11'-4"	18'-11"	14'-2"	11'-9"	9'-5"
	230	23'-7"	19'-2"	15'-11"	12'-8"	21'-3"	15'-11"	13'-3"	10'-7"
	360	24'-11"	19'-6"	16'-3"	13'-0"	21'-9"	16'-3"	13'-6"	10'-9"
	560	28'-3"	23'-10"	19'-10"	15'-10"	26'-6"	19'-10"	16'-6"	13'-2"

[1] Span values have not been evaluated for the effects of differential deflection and possible impacts on floor finishes. For a more detailed analysis, contact your Weyerhaeuser representative.

[2] See **Detail H2A** on next page.

General Notes

- Table is based on:
 - Uniform loads.
 - More restrictive of simple or continuous span.
 - Clear distance between supports.
 - Minimum bearing length of 1 3/4" end (no web stiffeners) and 3 1/2" intermediate.
- Glue-nailed floor sheathing assumed.
- For continuous spans, ratio of short span to long span should be 0.4 or greater to prevent uplift.
- Tables show maximum allowable clear span of damaged joist and adjacent joists for **Header-Off** repair.
 - Assumes worst case of moment, shear, reaction, and deflection controls.
- Use proper backer blocks and hangers (IUS or better) on adjacent joists.
- Verify existing holes in TJI® joists are still acceptable prior to installing header.
- 12" maximum spacing between headers.



See Specifier's Guide [TJ-4000](#) for additional information and installation details.

Weyerhaeuser prepared this drawing for the specification of Trus Joist products based on project information provided to us. This service is solely intended for product application assurance, and is not intended to disavow the need for a design professional as determined by the building codes. The designer of record and/or builder remains responsible to assure these drawings are compatible with the over all project.
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HEADER-OFF REPAIR DETAIL FOR DAMAGED TJI® JOISTS (SEE TB-816)

DRAWING DATE: 2017-07-31

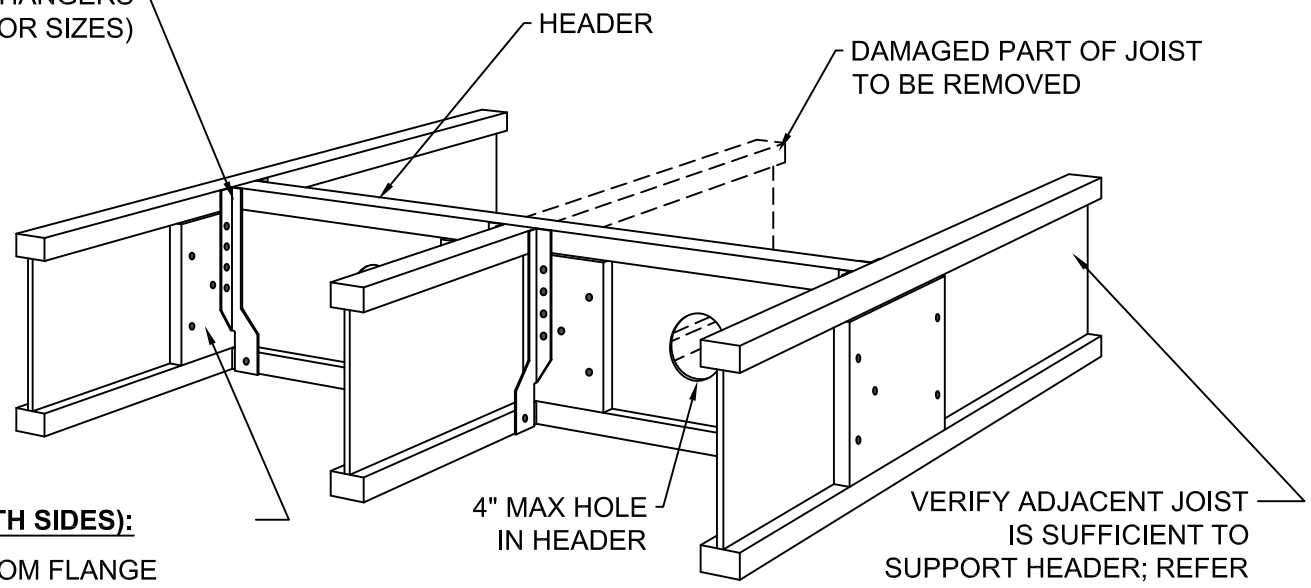
DRAWN BY: Justin Maghirang, E.I.T.

PROJECT #:
 SERVICE #:
 SHEET:

H2A

FACE MOUNT HANGERS
 (SEE CHART BELOW FOR SIZES)

H2A



[TYP] BACKER BLOCK (BOTH SIDES):

- INSTALL TIGHT TO BOTTOM FLANGE
- ATTACH WITH TEN (10) 10d (3") BOX NAILS, CLINCHED WHEN POSSIBLE
- IF NECESSARY, INCREASE FILLER/BACKER BLOCK HEIGHT FOR FACE MOUNT HANGERS AND MAINTAIN 1/8" GAP BELOW TOP FLANGE OF JOIST
- FILLER/BACKER BLOCK DIMENSIONS SHOULD ACCOMMODATE REQUIRED NAILING WITHOUT SPLITTING

HANGER BACKER BLOCK SIZES:

- TJI® 110 - 5/8" OR 3/4", MIN. LENGTH = 12"
- TJI® 210 - 3/4" OR 7/8", MIN. LENGTH = 12"
- TJI® 230 - 1" NET, MIN. LENGTH = 12"
- TJI® 360 - 1" NET, MIN. LENGTH = 12"
- TJI® 560 - 2x_, MIN. LENGTH = 12"

VERIFY ADJACENT JOIST IS SUFFICIENT TO SUPPORT HEADER; REFER TO TECHNICAL BULLETIN TB-816 OR FORTE SOFTWARE

Depth	TJI®	Simpson®	USP®
9 1/2"	110	IUS1.81/9.5	THF17925
	210	IUS2.06/9.5	THF20925
	230	IUS2.37/9.5	THF23925
11 7/8"	110	IUS1.81/11.88	THF17112
	210	IUS2.06/11.88	THF20112
	230	IUS2.37/11.88	THF23118
	360	IUS2.37/11.88	THF23118
	560	IUS3.56/11.88	THF35112
14"	110	IUS1.81/14	THF17140
	210	IUS2.06/14	THF20140
	230	IUS2.37/14	THF23140
	360	IUS2.37/14	THF23140
	560	IUS3.56/14	THF35140
16"	210	IUS2.06/16	THF20157
	230	IUS2.37/16	THF23160
	360	IUS2.37/16	THF23160
	560	IUS3.56/16	THF35157